Rule CIC230 The CICS Dynamic Transaction Backout buffer size may be too small

Finding: CPExpert believes that the buffer size allocated for the dynamic transaction backout buffer may too small.

Impact: This finding should normally have a LOW IMPACT on the performance of the CICS region.

Logic flow: This is a basic finding, based upon an analysis of the CICS statistics.

Discussion: The dynamic log buffer stores backout information in the dynamic log for dynamic transaction backout purposes. The maximum size of the dynamic buffer is specified by the DBUFSZ operand in the System Initialization Table (SIT).

The initial size of the dynamic log buffer is one-half the amount specified by the DBUFSZ, for each transaction. CICS dynamically adjusts the size of the dynamic log buffer based upon the requirements of each transaction.

If the data recorded in the dynamic log exceeds the buffer size, records spill on to temporary storage. The temporary storage can come from main storage or from auxiliary storage for CICS Systems prior to CICS Version 2.1.1. After CICS Version 2.1.1, the temporary storage will spill only to expanded storage if expanded storage is available.

Some spilling of the dynamic log is an expected effect of the dynamic adjustment of the size of the dynamic log buffer. There is a trade-off between the amount of storage allocated for the dynamic log buffer and the overhead caused by spilling records to auxiliary (or expanded) storage. This trade-off varies from system to system. However, the IBM CICS Performance Guide suggests that the DBUFSZ operand should be increased if more than 20% of the records are spilled.

CPExpert produces Rule CIC230 if more than 20% of the records logged by the dynamic transaction backout process are spilled.

Suggestion: CPExpert suggests that you consider increasing the buffer size for the dynamic transaction backout log buffer. This is accomplished by increasing the value of the DBUFSZ operand in the SIT.

Reference: *CICS/OS/VS Version 1.7 Performance* Guide: page 83 and pages 330-331.

CICS/MVS Version 2.1.2 Performance Guide: page 412 and pages 269-270.

CICS/ESA Version 3.1.1 Performance Guide: page 66 and pages 317-319.

CICS/ESA Version 3.2.1 Performance Guide: pages 215-216 and page 286.

CICS/ESA Version 3.3.1 Performance Guide: pages 235-236 and page 304.

CICS/ESA Version 4.1.1 Performance Guide: Section 4.7.14 and Appendix A.1.9.

CICS/TS: not applicable

CICS/TS for z/OS: not applicable..

